AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-34 (Canceled).

35. (Currently amended) A method of manufacturing a cooling plate for a metallurgical furnace, said method comprising:
providing a metallic plate body with a front face, a rear face and at least one channel extending through said metallic plate body beneath said front face;
inserting, with radial clearance, a metallic tube into said channel so that both tube ends protrude out of said channel; and
achieving a press fit of said tube within said channel by applying a metal-forming process providing a plastic deformation of [[to]] said metallic plate body.

36. (Previously presented) The method according to claim 35, wherein said metal-forming process provides an elastic deformation of said tube so as to produce a pre-tensioned fit of said tube in said channel.

37. (Previously presented) The method according to claim 36, wherein the step of providing a metallic plate body with at least one channel comprises:
a) providing a forged or rolled copper or steel slab; and
b) drilling said at least one channel through said slab.

38. (Previously presented) The method according to claim 36, wherein the step of providing a metallic plate body with at least one channel comprises:
continuously casting a metallic slab with at least one cast-in channel extending there through; and

manufacturing said metallic plate body out of said continuously cast metallic slab.

39. (Previously presented) The method according to claim 38, wherein the step of manufacturing said metallic plate body comprises:
machining said at least one cast-in channel with a metal-cutting tool so as to improve its dimensional and form tolerances.

40. (Previously presented) The method according to claim 35, wherein the step of achieving a press fit of said tube within said channel comprises a metal-forming process applied locally along said at least one channel.

41. (Previously presented) The method according to claim 40, wherein said metal-forming process applied locally along said at least one channel provides an elastic deformation of said tube so as to produce a pre-tensioned fit of said tube in said channel.

42. (Previously presented) The method according to claim 35, wherein the step of providing a metallic plate body with at least one channel comprises:
providing a bulge on said metallic plate body, said bulge extending along said at least one channel.

43. (Previously presented) The method according to claim 42, wherein said metal-forming process is applied to said bulge so as to depress the latter.

44. (Previously presented) The method according to claim 42, wherein the step of providing a metallic plate body with at least one channel further comprises:
providing an aperture within said bulge.

45. (Previously presented) The method according to claim 44, wherein said metal-forming process is applied to said bulge so as to depress the latter.

46. (Previously presented) The method according to claim 42, wherein the step of providing a metallic plate body with at least one channel further comprises: providing an aperture within said bulge, wherein said aperture extends into said at least one channel.

47. (Previously presented) The method according to claim 44, wherein said metal-forming process is applied to said bulge so as to reduce the width of said aperture.

48. (Previously presented) The method according to claim 35, wherein the step of achieving a press fit of said tube within said channel comprises:
rolling down said plate body after insertion of said metallic tube in said channel.

49. (Previously presented) The method according to claim 48, wherein said plate body is rolled down so as to confer an oval section to said channel and said tube.

50. (Previously presented) The method according to claim 35, wherein the step of achieving a press fit of said tube within said channel further comprises:
radially expanding said tube by establishing a hydraulic pressure inside said tube.

51. (Previously presented) The method according to claim 35, wherein the step of achieving a press fit of said tube within said channel further comprises:
radially expanding said tube with at least one explosion inside.

52. (Previously presented) The method according to claim 35, wherein the step of achieving a press fit of said tube within said channel further comprises:
expanding said tube by pulling an expansion head there through.

53. (Previously presented) The method according to claim 35, wherein said plate body is made of copper or steel.

54. (Previously presented) The method according to claim 35, wherein said tube is made of copper or stainless steel.

55. (Previously presented) The method according to claim 35, wherein:
each of said tube ends protruding out of said channel is bent towards the rear of the plate body, so as to form a connection pipe-end pointing in a direction substantially perpendicular to a plane parallel to the rear face of the plate body.

56. (Previously presented) The method according to claim 35, wherein the step of providing a metallic plate body comprises:
providing a plate body with a first perimeter face and an opposite second perimeter face, wherein said at least one channel extends through said metallic plate body so as to form a first opening in said first perimeter face and a second opening in said second perimeter face.

57. (Previously presented) The method according to claim 56, wherein at least one of said perimeter faces is bevelled towards the rear face of said plate body.

58. (Previously presented) The method according to claim 56, wherein for at least one of said openings, a recess is milled into said perimeter face, so that said recess is open towards the rear face of the plate body, and so that said opening lies within said recess.

59. (Previously presented) A cooling plate for a metallurgical furnace comprising a metallic plate body with a front face, a rear face and at least one metallic tube in a channel extending through in said metallic plate body beneath said front face so that both tube ends protrude out of said plate body, with a press fit between said metallic plate body and said at least one metallic tube, and with a plastic deformation of said metallic plate body along said channel, said plastic deformation providing a pre-dominant contribution to said press fit.

Claims 60-62.(Cancelled)

63. (Previously presented) The cooling plate according to claim 59, wherein said plate body is made of copper or steel.

64. (Previously presented) The cooling plate according to claim 59, wherein said tube is made of copper or stainless steel.

65. (Previously presented) The cooling plate according to claim 59, wherein said plate body is made of steel and said tube is made of copper.

66. (Previously presented) The cooling plate according to claim 59, wherein: each of said tube ends is bent so as to form a connection pipe-end pointing in a direction substantially perpendicular to a plane parallel to the rear face of the plate body.

67. (Previously presented) The cooling plate according to claim 59, wherein: said plate body as a first perimeter face and a second perimeter face; and said at least one tube extends through said metallic plate body so that one tube end emerges out of said first perimeter face and the other tube end emerges out of said second perimeter face.

68. (Previously presented) The cooling plate according to claim 67, wherein at least one of said perimeter faces is bevelled towards the rear face of said plate body.

68. (Previously presented) The cooling plate according to claim 67, wherein at least one of said perimeter faces includes a recess that is open towards said rear face of said plate body and in which said tube end emerges out of said plate body.